

Listing of claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (canceled)

2. (previously presented): A fusion protein comprising a functionally active portion of alpha 1-antitrypsin and a functionally active portion of secretory leukocyte protease inhibitor, wherein said fusion protein has alpha 1-antitrypsin protease inhibitor activity and secretory leukocyte protease inhibitor activity.

3. (canceled)

4. (previously presented) A fusion protein comprising

a) amino acids from about 1 to about 394 of SEQ ID NO: 2 ; and

b) amino acids from about 1 to about 107 of SEQ ID NO: 4, wherein said fusion protein has alpha 1-antitrypsin protease inhibitor activity and secretory leukocyte protease inhibitor activity.

Claims 5 -7 (canceled)

8. (previously presented): A pharmaceutical composition comprising the fusion protein of claim 2, admixed with a pharmaceutically acceptable vehicle.

Claims 9-15 (canceled)

16. (previously presented): The fusion protein of claim 4 wherein the carboxy terminus of amino acids from about 1 to about 394 of SEQ ID NO: 2 is linked to the amino terminus of amino acids from about 1 to about 107 of SEQ ID NO: 4.

17. (previously presented): The fusion protein of claim 4 wherein the carboxy terminus of amino acids from about 1 to about 107 of SEQ ID NO: 4 is linked to the amino terminus of amino acids from about 1 to about 394 of SEQ ID NO: 2.

Claims 18-25 (canceled)

26. (withdrawn): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claims 2 or 4.

27. (withdrawn): The method of claim 26 wherein the protease activity is associated with a disorder selected from the group consisting of emphysema, asthma, chronic obstructive pulmonary disease, cystic fibrosis, otitis media, and otitis externa.

28. (withdrawn): The method of claim 26, wherein the protease activity is associated with HIV infection.

29. (withdrawn): The method of claim 26, wherein the fusion protein is contacted with the protease by administering the fusion protein to an individual having the protease.

30. (withdrawn): A method of treating an individual suffering from, or at risk for, a disease or disorder involving unwanted protease activity comprising administering to the individual an effective amount of the fusion protein of claims 2-or 4.

31. (withdrawn): The method of claim 30, wherein the individual suffers from emphysema.

32. (withdrawn): The method of claim 30, wherein the individual suffers from asthma.

33. (withdrawn): The method of claim 30, wherein the individual suffers from chronic obstructive pulmonary disease.

34. (withdrawn): The method of claim 30, wherein the individual suffers from cystic fibrosis.
35. (withdrawn): The method of claim 30, wherein the individual suffers from otitis media or otitis externa.
36. (previously presented): The fusion protein of claim 4, comprising SEQ ID NO: 8.
37. (previously presented): The fusion protein of claim 4, comprising SEQ ID NO: 16.
38. (previously presented): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claims 36 or 37.
39. (previously presented): The method of claim 38 wherein the protease activity is associated with a disorder selected from the group consisting of emphysema, asthma, chronic obstructive pulmonary disease, cystic fibrosis, otitis media, and otitis externa.
40. (withdrawn): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claim 2.
41. (previously presented): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claim 4.
42. (previously presented): The fusion protein of claim 2, wherein said functionally active portion of alpha 1-antitrypsin has elastase inhibitory activity and said functionally active portion of secretory leukocyte protease inhibitor has elastase inhibitory activity.

Claim 43 -45 (canceled)

46. (previously presented) The fusion protein of claim 42 further comprising tryptase inhibitory activity.

47. (previously presented) The fusion protein of claim 2 or claim 42, wherein the specific activity of the elastase inhibitory activity of said fusion protein is double the specific activity of the elastase inhibitory activity of AAT.

48. (previously presented) A pharmaceutical composition comprising the fusion protein of claim 4 admixed with a pharmaceutically acceptable vehicle.

49. (previously presented) A pharmaceutical composition comprising the fusion protein of claim 42 admixed with a pharmaceutically acceptable vehicle.